

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed October 11, 2006. Claims 1-16, 21-25, and 27 remain pending in the present application. Claims 17-20, 26, and 28-58 have been canceled. Reconsideration and allowance of the application and pending claims are respectfully requested.

1. Indication of Allowable Subject Matter

Applicant greatly appreciates the Examiner's statement in the outstanding Office Action in which claim 20 has been indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In the present response, the features of claim 20 have been added to base claim 9 along with the features of claim 19. Therefore, independent claim 9 and its dependent claims should be allowed.

In that it is believed that every rejection and objection has been overcome, it is respectfully submitted that each of the claims that remains in the case is presently in condition for allowance.

Claim 20 is canceled without prejudice, waiver, or disclaimer, and therefore, the rejection to the claim is rendered moot. Applicant takes this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicant reserves the right to pursue the subject matter of the canceled claim in a continuing application, if Applicant so chooses, and does not intend to dedicate any of the canceled subject matter to the public.

2. Response to Objection of Claims

Claims 8, 16, and 17 have been objected to as to the claim language. The claim language has been amended to follow the interpretation of the Examiner. Accordingly, withdrawal of the objection is requested.

Regarding the citation found in page 7, lines 1-3 of the specification, a capillary passageway may have a length in a vertical direction and have a second dimension extending along an axis that is parallel to the direction of wipe. This second dimension may intersect with the contact surfaces of a wiper, in one

embodiment. Along this second dimension, however, the length is the same, in at least one embodiment.

3. Response to Rejections of Claims under 35 U.S.C. § 102

Claims 1-16 have been rejected under 35 U.S.C. § 102(b) as being anticipated by *Miyagawa* (JP 403215043A). Applicant respectfully traverses this rejection.

Claims 21-27 have been rejected under 35 U.S.C. § 102(b) as being anticipated by *Morikoshi* (JP 406071904A).

a. Claim 1

As provided in independent claim 1, Applicant claims:

A wiper apparatus comprising:

a wiper having a leading contact surface and a trailing contact surface, the leading contact surface leads the trailing contact surface in a direction of wipe during wiping;

a capillary passageway in the wiper sized to allow capillary flow of a liquid along the capillary passageway by capillary forces;

a second wiper oriented substantially parallel to the wiper, the second

wiper having a second leading contact surface and a second trailing contact surface; and

a second capillary passageway in the second wiper sized to allow capillary flow of a liquid along the second capillary passageway by capillary forces, **wherein:**

the wiper and second wiper are positioned relative to a nozzle plate of a printhead such that, during wiping, a first tip of the wiper and a third tip of the second wiper come into contact with a first nozzle array of the printhead, a second tip of the wiper and a fourth tip of the second wiper come into contact with a second nozzle array of the printhead, and the capillary passageway of the wiper and the second capillary passageway of the second wiper pass between the first nozzle array and the second nozzle array during wiping.

(Emphasis added).

Applicant respectfully submits that independent claim 1 is allowable for at least the reason that *Miyagawa* does not disclose, teach, or suggest at least “wherein: the wiper and second wiper are positioned relative to a nozzle plate of a printhead such that, during wiping, a first tip of the wiper and a third tip of the second wiper come into contact with a first nozzle array of the printhead, a second tip of the wiper and a fourth tip of the second wiper come into contact with a second nozzle

array of the printhead, and the capillary passageway of the wiper and the second capillary passageway of the second wiper pass between the first nozzle array and the second nozzle array during wiping," as recited and emphasized above in claim 1.

For at least the reason expressed regarding allowability of claim 20 in the Office Action, claim 1 is also allowable. For example, the cited art fails to teach or suggest at least "wherein: the wiper and second wiper are positioned relative to a nozzle plate of a printhead such that, during wiping, a first tip of the wiper and a third tip of the second wiper come into contact with a first nozzle array of the printhead, a second tip of the wiper and a fourth tip of the second wiper come into contact with a second nozzle array of the printhead, and the capillary passageway of the wiper and the second capillary passageway of the second wiper pass between the first nozzle array and the second nozzle array during wiping," as recited in claim 1.

Therefore, claim 1 is not anticipated by *Miyigawa*, and the rejection of claim 1 should be withdrawn.

b. Claims 2-8

Because independent claim 1 is allowable over the cited art of record, dependent claims 2-8 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that dependent claims 2-8 contain all the features of independent claim 1. For at least this reason, the rejections of claims 2-8 should be withdrawn.

c. Claim 9

As provided in independent claim 9, Applicant claims:

- A printer device comprising:
 - a printhead having a nozzle plate;
 - a wiper apparatus comprising:
 - a wiper oriented to wipe the nozzle plate of the printhead, the wiper having a leading contact surface and a trailing contact surface, the leading contact surface leads the trailing contact surface in a direction of wipe during wiping;
 - a capillary passageway formed in the wiper, sized to allow capillary flow of a liquid along the capillary passageway by capillary forces;
 - a second wiper oriented substantially parallel to the wiper, the second wiper having a second leading contact surface and a second trailing contact surface; and

the second wiper having a second capillary passageway formed in the second wiper and having a second length that extends at least partially between the second leading contact surface and the second trailing contact surface, and a second width that is less than the second length, **wherein:**

the printhead contains a first ink and a second ink, the second ink having a different composition than the first ink;

the nozzle plate has a first nozzle array to dispense the first ink and a second nozzle array to dispense the second ink; and

the wiper and second wiper are positioned relative to the nozzle plate of the printhead such that, during wiping, a first tip of the wiper and a third tip of the second wiper come into contact with the first nozzle array, a second tip of the wiper and a fourth tip of the second wiper come into contact with the second nozzle array, and the capillary passageway of the wiper and the second capillary passageway of the second wiper pass between the first nozzle array and the second nozzle array during wiping.

(Emphasis added).

Applicant respectfully submits that independent claim 9 is allowable for at least the reason that *Miyigawa* does not disclose, teach, or suggest at least wherein "the wiper and second wiper are positioned relative to the nozzle plate of the printhead such that, during wiping, a first tip of the wiper and a third tip of the second wiper come into contact with the first nozzle array, a second tip of the wiper and a fourth tip of the second wiper come into contact with the second nozzle array, and the capillary passageway of the wiper and the second capillary passageway of the second wiper pass between the first nozzle array and the second nozzle array during wiping," as recited and emphasized above in claim 9.

For at least the reason expressed regarding allowability of claim 9 in the Office Action, claim 9 is also allowable. Page 15. For example, the cited art fails to teach or suggest at least wherein "the wiper and second wiper are positioned relative to the nozzle plate of the printhead such that, during wiping, a first tip of the wiper and a third tip of the second wiper come into contact with the first nozzle array, a second tip of the wiper and a fourth tip of the second wiper come into contact with the second nozzle array, and the capillary passageway of the wiper and the second capillary passageway of the second wiper pass between the first nozzle array and the second nozzle array during wiping," as recited in claim 9.

Therefore, claim 9 is not anticipated by *Miyigawa*, and the rejection of claim 9 should be withdrawn.

d. Claims 10-16

Because independent claim 9 is allowable over the cited art of record, dependent claims 10-16 (which depend from independent claim 9) are allowable as a matter of law for at least the reason that dependent claims 10-16 contain all the features of independent claim 9. For at least this reason, the rejections of claims 10-16 should be withdrawn.

e. Claim 21

As provided in independent claim 21, Applicant claims:

A printer device comprising:

a printhead that dispenses a first ink and a second ink through a nozzle plate, the second ink having a different composition than the first ink;

a wiper for wiping the nozzle plate of the printhead;

a means for substantially preventing mixing of the first ink and the second ink on the nozzle plate during wiping by the wiper, wherein during wiping, the means for substantially preventing mixing passing between the first nozzle array and the second nozzle array during wiping;

a second wiper for wiping the nozzle plate of the printhead, the second wiper oriented substantially parallel to the wiper; and

a second means for substantially preventing mixing of the first ink and the second ink on the nozzle plate during wiping by the second wiper, the second means for substantially preventing mixing passing between the first nozzle array and the second nozzle array during wiping, wherein:

a portion of the wiper and a portion of the second wiper come into contact with a first nozzle array of the printhead and a second portion of the wiper and a second portion of the second wiper come into contact with a second nozzle array of the printhead.

(Emphasis added).

Applicant respectfully submits that independent claim 21 is allowable for at least the reason that *Morikoshi* does not disclose, teach, or suggest at least “a means for substantially preventing mixing of the first ink and the second ink on the nozzle plate during wiping by the wiper, wherein during wiping, the means for substantially preventing mixing passing between the first nozzle array and the second nozzle array during wiping,” “a second means for substantially preventing mixing of the first ink and the second ink on the nozzle plate during wiping by the

second wiper, the second means for substantially preventing mixing passing between the first nozzle array and the second nozzle array during wiping,” and “wherein: a portion of the wiper and a portion of the second wiper come into contact with a first nozzle array of the printhead and a second portion of the wiper and a second portion of the second wiper come into contact with a second nozzle array of the printhead,” as recited and emphasized above in claim 21.

For at least the reason expressed regarding allowability of claim 9 in the Office Action, claim 9 is also allowable. Page 15. For example, the cited art fails to teach or suggest at least “a means for substantially preventing mixing of the first ink and the second ink on the nozzle plate during wiping by the wiper, wherein during wiping, the means for substantially preventing mixing passing between the first nozzle array and the second nozzle array during wiping,” “a second means for substantially preventing mixing of the first ink and the second ink on the nozzle plate during wiping by the second wiper, the second means for substantially preventing mixing passing between the first nozzle array and the second nozzle array during wiping,” and “wherein: a portion of the wiper and a portion of the second wiper come into contact with a first nozzle array of the printhead and a second portion of the wiper and a second portion of the second wiper come into contact with a second nozzle array of the printhead,” as recited in claim 21.

Therefore, claim 21 is not anticipated by *Morikoshi*, and the rejection of claim 21 should be withdrawn.

f. Claims 22-24

Because independent claim 21 is allowable over the cited art of record, dependent claims 22-24 (which depend from independent claim 21) are allowable as a matter of law for at least the reason that dependent claims 22-24 contain all the features of independent claim 21. For at least this reason, the rejections of claims 22-25 should be withdrawn.

g. **Claim 25**

As provided in independent claim 25, Applicant claims:

A method for cleaning a printhead comprising:

placing a wiper in contact with the printhead having a nozzle plate that dispenses a first ink and a second ink, the second ink having a different composition than the first ink;

moving the wiper relative to the nozzle plate in a first direction of wipe, wherein a first tip of the wiper is moved across a first nozzle array of the nozzle plate and a second tip of the wiper is moved across a second nozzle array of the nozzle plate;

drawing, by capillary action, the first ink and the second ink into a capillary passageway of the wiper;

moving the capillary passageway along the nozzle plate between the first nozzle array and the second nozzle array;

placing a second wiper in contact with the printhead having the nozzle plate that dispenses the first ink and the second ink, the second wiper oriented substantially parallel to the wiper;

moving the second wiper relative to the nozzle plate in the first direction of wipe, wherein a third tip of the second wiper is moved across a first nozzle array of the nozzle plate and a fourth tip of the second wiper is moved across a second nozzle array of the nozzle plate;

drawing, by capillary action, the first ink and the second ink into a second capillary passageway of the second wiper; and

moving the second capillary passageway along the nozzle plate between the first nozzle array and the second nozzle array.

(Emphasis added).

Applicant respectfully submits that independent claim 25 is allowable for at least the reason that *Morikoshi* does not disclose, teach, or suggest at least “moving the wiper relative to the nozzle plate in a first direction of wipe, wherein a first tip of the wiper is moved across a first nozzle array of the nozzle plate and a second tip of the wiper is moved across a second nozzle array of the nozzle plate,” “moving the capillary passageway along the nozzle plate between the first nozzle array and the second nozzle array,” “moving the second wiper relative to the nozzle plate in the first direction of wipe, wherein a third tip of the second wiper is moved across a first nozzle array of the nozzle plate and a fourth tip of the second wiper is moved across a second nozzle array of the nozzle plate,” and “moving the second capillary passageway along the nozzle plate between the first nozzle array and the second nozzle array,” as recited and emphasized above in claim 25.

For at least the reason expressed regarding allowability of claim 9 in the Office Action, claim 9 is also allowable. Page 15. For example, the cited art fails to teach or suggest at least "moving the wiper relative to the nozzle plate in a first direction of wipe, wherein a first tip of the wiper is moved across a first nozzle array of the nozzle plate and a second tip of the wiper is moved across a second nozzle array of the nozzle plate," "moving the capillary passageway along the nozzle plate between the first nozzle array and the second nozzle array," "moving the second wiper relative to the nozzle plate in the first direction of wipe, wherein a third tip of the second wiper is moved across a first nozzle array of the nozzle plate and a fourth tip of the second wiper is moved across a second nozzle array of the nozzle plate," and "moving the second capillary passageway along the nozzle plate between the first nozzle array and the second nozzle array," as recited in claim 25.

Therefore, claim 25 is not anticipated by *Morikoshi*, and the rejection of claim 25 should be withdrawn.

h. Claims 26-27

Because independent claim 25 is allowable over the cited art of record, dependent claim 27 (which depends from independent claim 25) is allowable as a matter of law for at least the reason that dependent claim 27 contains all the features of independent claim 25. For at least this reason, the rejection of claim 27 should be withdrawn.

Claim 26 is canceled without prejudice, waiver, or disclaimer, and therefore, the rejection to the claim is rendered moot. Applicant takes this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicant reserves the right to pursue the subject matter of the canceled claim in a continuing application, if Applicant so chooses, and does not intend to dedicate any of the canceled subject matter to the public.

4. Response to Rejections of Claims under 35 U.S.C. § 103

Claims 17-18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Miyagawa* (JP 403215043A) in view of *Morikoshi* (JP 406071904A). Applicant respectfully traverses this rejection. Claim 19 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Miyagawa* (JP 403215043A).

Claims 17-19 are canceled without prejudice, waiver, or disclaimer, and therefore, the rejection to the claims is rendered moot. Applicant takes this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicant reserves the right to pursue the subject matter of the canceled claims in a continuing application, if Applicant so chooses, and does not intend to dedicate any of the canceled subject matter to the public.

5. Cancellation of Claims 28-58

Claims 28-58 are canceled without prejudice, waiver, or disclaimer. Applicant takes this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicant reserves the right to pursue the subject matter of the canceled claims in a continuing application, if Applicant so chooses, and does not intend to dedicate any of the canceled subject matter to the public.

CONCLUSION

For at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,



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